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| (71) Applicant: CVBASE AG [CH/CH]; 61, Goethestrasse, CH-9008 St. Gallen (CH). | | | Published |
| (72) Inventor: FERIN, Fulvio; Technology Consulting sas, Via Venini, 5, I-20127 Milano (IT). | | | With international search report. |
| (74) Agent: RICCARDI, Sergio; Riccardi & Co., Via Macedonio Melloni, 32, I-20129 Milano (IT). | | | |
| (54) Title: METHOD AND SYSTEM FOR STRUCTURED PROCESSING OF PERSONAL INFORMATION | | | |
| (57) Abstract | | | |
| <p>A system and method for providing structured processing of personal information, which allows a user to create curricula vitae exhaustive from an information standpoint based on a predetermined information structure which is compatible with one or more subscribing remote information processing systems of, e.g., potential employers, such that virtually all the personal information is readily available for processing by aimed query. In one aspect, a computer implemented method for structured processing of personal information comprises the steps of: inputting personal information using displayed data entry masks comprising a plurality of predetermined data entry fields; generating a file of a proprietary format comprising a digital codification of the personal information input in the predetermined data entry fields; downloading the file in a database of at least one corresponding remote processing system capable of processing the proprietary format of the file; and searching for desired personal information stored in the database using displayed query masks comprising data entry fields corresponding to the data fields of the input data entry masks.</p> | | | |
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METHOD AND SYSTEM FOR STRUCTURED PROCESSING OF PERSONAL INFORMATION

BACKGROUND

5 1. Technical Field

The present invention relates to a method and a system for structured processing of personal information and, more particularly, to a computer implemented method and system for generating and processing curricula vitae, whereby a person seeking employment can generate a curricula vitae by inputting 10 personal information using data entry fields which are structured in accordance with preselected codified data types such that one or more potential employers, using a corresponding computing system, can automatically download such curricula into a database and query the database using search parameters based on the codified data fields.

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2. Description of the Related Art

Traditionally, the meeting point between job demand and offer has been based on curricula vitae (or resume). In this connection, certain techniques have been developed to assist a person seeking employment to draft curricula vitae (or 20 «resume»). In addition, techniques have been developed to assist in the collection, organization and selection of such curricula vitae by enterprises, institutions or personnel selection agencies seeking potential candidates. Conventionally, there are three main steps involved in this process. The first step 25 is the traditional paper mailing process, whereby the candidate drafts his/her curriculum in a free, autonomous form and sends a copy thereof to either one or more potential employers which the candidate may have a particular interest or to a plurality of potential employers in a mass mailing. For each potential employer, the candidate may modify either the content of the curriculum itself or an accompanying cover letter. Moreover, if the candidate has an international 30 interest, the curriculum vitae must be drafted in or translated into one or more

foreign languages.

There are several problems associated with this process. For instance, despite the candidate's effort and significant expenditures on economic resources, the candidate may not be able to determine which, if any, of the potential 5 employers considered his/her curricula vitae and entered its content in the employers' database. Furthermore, the curricula vitae may not contain - even purposely - the information required by, or necessary for, the personnel selectioner to perform a proper evaluation of the candidate.

The second step in the conventional process begins when the target 10 companies receive the candidate's curricula vitae as well as a plurality of other of paper documents from other potential candidates, and then proceed to select candidates whom they want to either interview or obtain additional information from (which is typically a small percentage of candidates). The selection process is typically based on priority criteria established on a case-by-case basis. 15 However, the selection process between the various resumes is difficult due to the liberty and subjectiveness of the persons initially reviewing the resumes.

For this reason, most companies and, particularly, the personnel selection 20 agencies proceed to create and maintain a candidate database, which is the third step in the conventional process. In this process, the companies may codify certain information, for instance, educational qualification, profession, and economic area, etc. and manually input this information in the database from the selected resumes. The manual entry process, however, may be costly and is subject to errors in the input information. Consequently, companies typically limit 25 the amount and type of information that will be extracted from each resume and entered in the database. Unfortunately, this limits the criteria usable during database queries when seeking potential candidates, which actually leads to higher costs in the selection process.

A first solution to manual database entry proposed in the art involves 30 scanning the resumes using optical character recognition techniques, and then creating various "keywords" which are used for querying the database. The basic

problem remains that not all resumes contain the information relevant for the company. Therefore, the company are compelled to contact the potential candidates to supplement their resumes with the missing information, a factor which adds to the already relevant costs. From the point of view of the 5 perspective employee, this solution offers no advantage.

A second solution more recently proposed has been the result of the increasing diffusion of information networks such as the Internet. For instance, the **CV-BUILDER** which is widespread mainly in the U.S.A., consists essentially of forms which are completed "on-line" at web sites of the participating companies. 10 There are several advantages with this method from the standpoint of the companies. First, the costs decrease because manual entry in the database is avoided. In addition, since the "on-line" form is specifically developed for the company, the essential selection criteria is already present and codified in a searchable format.

15 This "on-line" method, however, does have several disadvantages. For instance, the information collected must be kept as contained so as to not overload the site and consequently the fill-in work by the candidate. Other disadvantages are that data entry via Internet is rather slow, and the formats of the forms of the various companies are not standardized. In particular, each form 20 proposes questions according to a proprietary plan, which the candidate must understand before inputting his/her answers. In addition, the telephone connection cost to the potential candidate may exceed the costs for a postal mailing. Moreover, for each new company the form has to be filled-in ex novo. Another disadvantage is that the "on-line" data entry may be interrupted or 25 temporarily suspended due to, e.g., a telephone line disconnection, so that there is the risk of having to start again.

Another relevant aspect, not satisfactorily solved by any of the above proposed solutions are the laws regarding personal data handling which impose on database managers the obligation to guarantee data accuracy to those 30 interested as well as obtain consent for use of the personal information.

SUMMARY

The present application is directed to system and method for providing structured processing of personal information. The present invention overcomes the above noted disadvantages by allowing a user to create curricula vitae 5 exhaustive from an information standpoint based on a predetermined information structure which is compatible with one or more subscribing remote information processing systems of, e.g., potential employers such that virtually all the personal information is readily available for processing by aimed query.

In one aspect of the present invention, a computer implemented method for 10 structured processing of personal information comprises the steps of:

inputting personal information using displayed data entry masks comprising a plurality of predetermined data entry fields;

generating a file of a proprietary format comprising a digital codification of the personal information input in the predetermined data entry fields;

15 downloading the file in a database of at least one corresponding remote processing system capable of processing the proprietary format of the file; and

searching for desired personal information stored in the database using displayed query masks comprising data entry fields corresponding to the data fields of the input data entry masks.

20 In another aspect of the present invention, a system for providing structured processing of personal information comprises:

at least one generation system including:

means for inputting personal information in accordance with predetermined data entry fields;

25 means for generating a file by digitally codifying the input personal information in each of the data entry fields; and

at least one processing system including:

means for automatically storing the file in a database; means for inputting query parameters in accordance with query parameter fields, the query parameter fields corresponding to the data entry fields of the at least one generation system;

means for digitally codifying the input query parameters; and
means for searching for desired personal information stored in the database
using the digitally codified input query parameters.

These and other aspects, features and advantages of the present system
5 and method will become apparent from the following detailed description of
preferred embodiments, which is to be read in connection with the accompanying
drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

10 FIG. 1 is a block diagram which illustrates a system for structured processing
of personal information according to an embodiment of the present invention;
FIG. 2 is a diagram of an exemplary data entry mask which may be used in
the system of FIG. 1 in accordance with one aspect of the present invention; and
FIGs. 3A and 3B illustrate a flow diagram of a method for structured
15 processing of personal information in accordance with one aspect of the present
invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Referring now to FIG. 1, a block diagram illustrates a system for structured
20 processing of personal information according to an embodiment of the present
invention. The system comprises subsystem 100 which is utilized by a person
seeking employment (or "generation subsystem") and subsystem 200 which is
utilized by personnel selecting users (or "processing subsystem") such as
companies specialized in personnel selection (i.e., "head-hunters"), as well as
25 companies interested in personally handling and maintaining a database of
perspective employees and/or of their own staff. Advantageously, the subsystems
100 and 200 are integrated in a manner (as described below) so as to optimize the
process of generating and processing curricula vitae.

It is to be appreciated that generation subsystem 100 and the processing
30 subsystem 200 may be operatively connected via an information network 300. It

is to be appreciated that a plurality of processing subsystems and generation subsystems may be connected via the information network 300. In this regard, the information network 300 may include access over the Internet or through a local or wide area network between any number of generation and processing subsystems either directly or via modem.

It is to be understood that the subsystems of FIG. 1 (as well as the process described below with reference to FIGs. 3A and 3B) may be implemented in various forms of hardware, software, firmware, or a combination thereof. Preferably, the subsystems 100 and 200 of FIG. 1 are implemented in software as application programs which can be executed on a general purpose computer having any suitable and preferred microprocessor architecture. For instance, the computer platform includes hardware such as one or more central processing units (CPU), a random access memory (RAM), and input/output (I/O) interface(s). The computer platform also includes an operating system and/or microinstruction code. The various processes and functions described herein may be either part of the microinstruction code or application programs which are executed via the operating system. In addition, various other peripheral devices may be connected to the computer platform such as an additional data storage device and a printing device.

It is to be further understood that because the elements of the subsystems 100 and 200 are preferably implemented as software modules, the actual connections shown in FIG. 1 (as well as the methods steps of FIGs. 3A and 3B) may differ depending upon the manner in which the individual subsystems are programmed. Of course, special purpose microprocessors may be employed to implement the present system. Given the teachings herein, one of ordinary skill in the related art will be able to contemplate these and similar implementations or configurations of the present invention.

The generating subsystem 100 includes a user interface 110 which may be, for example, a computer display having a suitable GUI (graphic user interface) to display one or more data entry masks 110. Each data entry mask 110 comprises

a one or more input data fields which allow the user to input corresponding information. Advantageously, the separation of the required information in a plurality of masks is based on specific operative functions of interest in a curriculum vitae such as personal data, studies, known languages, career, and job 5 experience. Each data entry mask 110 essentially provides for two types of input fields: input fields for free text or format-specific strings such as dates, and input fields that allow a user to select items from a list.

Referring to FIG. 2, by way of example, a data entry mask 110a illustrates a mask which may be used in connection with the candidate's previous 10 employment. The data entry mask 110a presents, for each of the candidate's previous employment experience, a "start date" field 110b and an "end date" field 110c, and a plurality of headings 110d which display (upon selection of one of the headings 110d) one or more data fields (not shown) for inputting personal information related to each heading 110d. A summary of the input information for 15 each heading 110d may be displayed in a corresponding display field 110e. The data entry mask 110a assists a candidate to provide relevant information relating to the company and the organizational unit within the company where the experience was made. As far as the company is concerned, in addition to the typical personnel and general information such as size, ownership, and place of 20 business, the functional structure is also acquired (e.g., functional, divisional, matrix-type, etc.). In addition, the organizational unit within the company may be characterized by the selection (via item selection fields) of information of the following typologies: (1) the economic activity of the organizational unit; (2) the indirect weight of the candidate's position within the unit; (3) the working areas 25 and the relative contexts with respect to the economic activity of the organizational unit, with an indication of the path of organizational development in terms of acquired competence; (4) the geographic width of the acquired responsibilities; and (5) the employment title within the organizational unit. In addition, the data entry mask 110a may include a heading 110f which allows the candidate to input 30 a free-text description of his experience with the company.

The diagram of FIG. 2 is exemplary of the richness of the information acquired by the subsystem 100 according to the invention. Although such information typically does not accompany the curricula vitae, the present invention advantageously allows such information to be acquired in a context-sensitive 5 manner. For instance, if the candidate is seeking his/her first job, the data entry mask 110a relating to previous employment may not be displayed at all. In addition, for the participating companies, items corresponding to the activities which can normally be found in similar companies will be presented in the proper item selection fields. Therefore, the generation subsystem 100 assists the 10 candidate in drafting a superior quality curriculum which contains all information necessary for the personnel selection companies.

The information input by the candidate during the data mask entry process is codified via codification module 120 in accordance with available codified items in dictionaries 140 to generate a file which is stored in memory 130. The amount 15 of codified items in the dictionaries 140 may be several thousand, and, by way of example, divided in the following main sections: educational qualifications; economic activities; job qualifications; organizational units; and levels of knowledge of foreign languages. Advantageously, the various economic activities and the job qualifications may be classified coherently (i.e., standardized) with the main 20 relevant international classifications.

As explained above, the majority of the information comprising the curriculum is presented to the user in the data entry masks 110 in the form of selectable items (codified) and directly written into the file in a proprietary format using the codified, digital, symbolic representation, without the need to use specific language. In this 25 regard, the plurality of dictionaries 140 may comprise suitable linguistic dictionary modules so as to allow the candidate to print the same curriculum in different languages without making any translation or further inputting data. In addition, the dictionaries module 140 may further comprise a description of the fields displayed while using the generation subsystem 100, as well as answers to most 30 frequently asked questions and a series of quick tips to assist a user seeking help

while using the generation subsystem 100.

The generation subsystem 100 may also include an image/audio processing module 150 which allows a user to produce a digital photograph (via scanning a paper photograph or directly by a digital camera) to accompany to the user's own 5 curriculum, and/or a multimedia file, which may contain a movie, a sound or both, that allows the user to provide further information of interest.

Advantageously, the generation subsystem 100 further comprises subscriber information 160 which comprises a list of companies having the corresponding processing subsystem 200 of the present invention (described in detail below) to 10 allow the user to select desired companies to send his/her curriculum. It is to be appreciated that for each subscribing company, the subscriber information 160 may be used by data entry mask module 110 to display specific data entry masks comprising specific input fields which allow the user to input specific information sought by a corresponding company such as the reason for sending the 15 curriculum (reference to an advertisement, spontaneous forwarding etc.). In addition, the specific masks of the companies will contain other relevant information such as, for instance, whether multimedia accompanying files are acceptable and the minimum requirements for sending the curriculum.

If the computer platform which is used for executing/implementing the 20 generation subsystem 100 is connected to the information network 300 (e.g. Internet), a communications module 170, which comprises conventional software and hardware for providing network connection, may be included for electronically forwarding the generated file to one or more processing subsystems 200 connected to the network 300. In this regard, the subscriber information 160 may 25 periodically be downloaded to the generation subsystem 100 from the information network 300 via the communications module 170 of generation subsystem 100.

The generation subsystem 100 may also comprise a private key or user-selected password 180 to protect each generated curriculum from being accessed by unauthorized individuals. In particular, the password/key 180 protects against 30 unauthorized modification of the content of the curricula, as well as unauthorized

reading and sending of the curricula. For further discretion, the generation subsystem 100 may also be programmed to provide the possibility of being executed without requiring installation, e.g., to be used in such a mode as to leave no trace of its execution in the computer because it does not create any
5 permanent file.

In a preferred embodiment, an encryption module 190 may be included to automatically encode a file (i.e., the curriculum vitae) which is forwarded via the information network 300 such that the file may only be decrypted by the companies possessing the corresponding processing subsystem 200. In addition,
10 the generation subsystem 100 may be configured to allow the user to display and print the curriculum itself, as well a transmission log regarding dates and times the resume was sent via mail or transmitted via the information network 300 to the potential employers.

Referring to FIG. 3A, a flow diagram illustrates a method for generating a
15 resume using the generation subsystem 100 in accordance with one aspect of the present invention. Initially, the user may select a language from a list of available languages (step 300) so that the user can read the displayed text of the data fields and the selectable data entry items in his/her language. Next, the generation subsystem 100 will display each of the data entry masks (one at a time) and the
20 user will complete each data entry mask by entering his/her personal information in the data fields associated with each data entry mask (step 301). The input data will then be stored in a file in accordance with the proprietary codified format (step 302).

If the user desires to attach a digital image of him/herself and/or a multimedia
25 file to provide additional information (affirmative decision in step 303), the image and/or multimedia data can be attached to the file (step 304). Next, the codified file (an the image/multimedia data) will be encrypted using a proprietary encryption key (step 305). The user may then select (from the list of subscribing companies) each company the user desires to send his/her resume (step 306).
30 Then, data entry masks which are specific to one or more of the selected

companies may be displayed (step 307), which allows the user to input specific information requested by a given selected company (e.g., whether the resume is being sent in response to an advertisement, etc.). In addition, other masks may be displayed for providing the user with information regarding a given selected 5 company's requirement for sending a resume, etc.). The encrypted file may then be transmitted to each of the selected companies via the information network (step 308). Alternatively, as discussed above, the encrypted file may be stored one or more magnetic floppy disks and mailed to the desired companies. Then, as discussed above, the stored transmission log may be automatically updated (step 10 309).

Referring again to FIG. 1, the corresponding processing subsystem 200 of the present invention (which is utilized by, e.g., personnel selecting users) comprises database 210 for storing the curricula generated by the generation subsystem 100. The processing subsystem 200 is configured to automatically 15 enter personal information of the file into the database 210. In a preferred embodiment, the processing subsystem 200 is configured to automatically downloaded resume information from the information network 300 via a communications module 220 similar to that discussed above. With this method, it is to be appreciated that the costs for downloading each curriculum into 20 database 210 is minimal. In this respect, it should be emphasized that the preferred process of utilizing the information network 300 to transmit and receive the curricula is wholly autonomous since a so-called "browser" of electronic mail is not required.

Alternatively, the resume data may downloaded from a magnetic disk (not 25 shown) which is provided by the candidate. Even when the forwarding occurs by means of floppy disks or other data support, however, the loading cost is extremely limited because no digitizing and scanning methods or manual input and control operations are necessary.

Advantageously, the use of the information network 300 by a candidate to 30 forward a resume offers various advantages. One advantage is that via a single

telephone call, the candidate may simultaneously transmit his/her resume to all the desired companies. In addition, the candidate will automatically receive confirmation that the candidate's resume was input in curriculum database 210 of the desired companies. Moreover, the candidate may periodically transmit 5 updates of his/her resume to the same recipients to update the candidate's personal information stored in the recipient's database 210. In addition, the candidate may transmit a request that his/her personal information be deleted from the recipient's database 210. Accordingly, it is to be appreciated that the present invention eliminates the burden of conventional methods regarding "on-line" 10 completion of forms, namely, the candidate is not restricted to complete the curriculum in one step during a telephone connection, but he may proceed «off-line» and save, load and edit more versions of his/her own curriculum in several steps.

The processing subsystem 200 further comprises a display/query module 15 230 for displaying masks analogous to those described above but which serve to input query parameters. The display/query module 230 comprises a suitable database query engine which can operate on all the resume information codified in digital form in accordance with the present invention (e.g., educational qualifications, the profession, the organizational position, the experience, the field, 20 the economic activity of the company etc.). The display/query module 230 is also configured for searching using keywords to search for candidates, for instance, having worked in a specified company and displaying retrieved data in the form of tables containing data from various selected curricula. The display/query module 230 may also be configured to allow the user to store a specific search 25 strategy in query search database 240 so that it may be used again, possibly modified. The display/query module 230 may also be configured to allow the user to store the names of all potential candidates in candidate evaluation store 250 who are personally interviewed within the frame of a selection, as well as attaching some evaluation arrived at during such interviews by introducing personalized 30 evaluation criteria. Advantageously, for each sought position, the personnel

selection company may obtain, from a suitable statistic module 260, data such as statistic remuneration parameters, an analysis of the mean remuneration with respect to age, economic field, profession etc., the number of the candidates having replied to each specific advertising, the number of the candidates deemed interesting, the number of those interviewed and hired, etc.

5 The processing subsystem 200 is protected by a hardware key and a software key 270 which are used for interpreting the curriculum proprietary format of the present invention and decrypting the curricula received via information network 300.

10 Advantageously, the codification scheme of the processing subsystem 200 and the generating subsystem 100 is independent of the particular language, thereby allowing the personnel selection company to process the received information in any desired language. For instance, a curriculum drafted in Italian might be displayed, queried and printed in another language such as in English 15 by the processing subsystem 200 using dictionary modules 280 similar to those described with reference to the generation subsystem 100.

20 It is to be appreciated that the curriculum database 210 which is generated and managed via the processing subsystem 200 also allows for the import of curricula from other compatible databases (e.g., databases of other processing subsystems). Accordingly, a user may load curricula stored at remote locations, as well as clear export, namely, in not-codified form, towards any other (e.g., 25 incompatible) processing system.

Referring now to FIG. 3B, a flow diagram illustrates a method for information retrieval which may be implemented in the processing subsystem 200. In order 25 to search the database, the files generated by users of the generation subsystem 100 are imported into the database (step 310). A query search mode is selected by the user to display one or more query masks (step 311). The user then inputs desired query parameters in the fields of the displayed query masks (step 312).

30 The query parameters are processed in accordance with the digital codifications of the corresponding fields of the data entry masks in generation subsystem 100

(step 313). Then, the database is searched according to desired logical relations between the digital codifications of the stored files and the digital codifications of the query parameters (step 314). The query engine will retrieve from the database references to candidates having the queried information (step 315). If desired, the 5 user may view the files associated with one or more of the retrieved references by retrieving the desired files from the database 210, decrypting the files, and displaying the files in any desired language (316).

From a personal data confidentiality standpoint, the system described herein complies with any mandates on personal data handling. For instance, the present 10 system eliminates the main problem of having to physically protect and maintain the paper curriculum. Moreover, the personal information of each candidate is maintained and stored in encrypted form in database 210. Furthermore, since the access and decrypt keys comprise the software key which is only known to the person responsible of data security in the company, and a hardware key which is 15 factory wired, in the event that the physical supports were removed, it would be virtually impossible for an unauthorized third person to interpret the content of database 210 without possessing both the keys (i.e., hardware and software). In addition, by configuring the generating subsystem 100 to prompt the candidate employees to provide information regarding personal data handling and obtain any 20 required consent, the receiving company may acquire, in the format of the curriculum itself, the candidate's consent to the specific use of his/her personal data.

Although illustrative embodiments have been described herein with reference to the accompanying drawings, it is to be understood that the present 25 invention is not limited to those precise embodiments, and that various other changes and modifications may be affected therein by one skilled in the art without departing from the scope or spirit of the invention. All such changes and modifications are intended to be included within the scope of the invention as defined by the appended claims.

CLAIMS

- 1 A computer implemented method for structured processing of personal information, comprising the steps of:
 - 5 inputting personal information using displayed data entry masks comprising a plurality of predetermined data entry fields; generating a file of a proprietary format comprising a digital codification of the personal information input in the predetermined data entry fields; downloading the file in a database of at least one corresponding remote processing system capable of processing the proprietary format of the file; and searching for desired personal information stored in the database using displayed query masks comprising data entry fields corresponding to the data fields of the input data entry masks.
 - 15 2 The method of claim 1, wherein the data entry fields of the input data entry masks comprise text string entry fields and item selection fields, and wherein the query masks comprise item selection fields corresponding to the item selection fields of the data entry masks.
 - 20 3 The method of claim 2, wherein the digital codification of the file corresponds to the information input in accordance with the corresponding item selection fields.
 - 25 4 The method of claim 1, wherein the searching step comprises the steps of:
 - inputting at least one query parameter using the displayed query masks;
 - generating a corresponding digital codification of the at least one input query parameter;
 - selecting at least one stored file from the database in accordance with logical relations between the digital codification of the stored file and the digital

codification of the at least one query parameter; and
displaying the at least one selected file, wherein the digital codification of the inputs of the at least one selected file are displayed in the corresponding data fields of the query mask.

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5 The method of claim 1, wherein the data entry masks and the query masks and corresponding data entry fields of the masks are dynamically generated in a context sensitive way.

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6 The method of claim 2, wherein the items of the item selection fields are capable of being displayed in one of a plurality of different languages.

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7 The method of claim 1, wherein the step of generating the file includes the step of encrypting the file, and the step of downloading the file includes the step of decrypting the file.

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8 The method of claim 1, wherein the step of downloading the file in the remote database includes the step of transmitting the file to the remote database using an information network.

9 The method of claim 1, further comprising the step of generating one of a multimedia file, a digital image, and a combination thereof, to associate with the generated file.

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10 The method of claim 1, wherein the step of inputting personal information includes the steps of:

selecting, from a stored list, one of a single and plurality of personnel selection users having the corresponding processing system to which a file is to be sent; and

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displaying, for each selected personnel selection user, at least one data entry

mask having fields which are specific to the personnel selection user.

11 The method of claim 10, wherein the stored list is generated by information received via an information network.

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12 The method of claim 1, further comprising the step of generating a list comprising the identity of a proprietor of each remote processing system to which the file was sent.

10 13 A system for providing structured processing of personal information, comprising:

at least one generation system comprising:

means for inputting personal information in accordance with predetermined data entry fields;

15 means for generating a file by digitally codifying the personal information input in each of the data entry fields; and

at least one processing system comprising;

means for automatically storing the file in a database;

means for inputting query parameters in accordance with query parameter

20 fields, the query parameter fields corresponding to the predetermined data entry fields of the at least one generation system;

means for digitally codifying the input query parameters; and

means for searching for desired personal information stored in the database using the digitally codified input query parameters.

25

14 The system of claim 13, wherein the at least one generation system includes means for transmitting the file via an information network and the at least one processing system includes means for receiving the file transmitted via the information network.

30

15 The system of claim 13, wherein the input means include means for displaying a plurality of data entry masks comprising text string input fields and item selection fields.

5 16 The system of claim 13, wherein the searching means includes means for selecting at least one stored file in the database according to logical relations among the digital codifications of the stored files and the digital codifications of the query parameters.

10 17 The system of claim 13, further comprising means for processing the digital codifications of the file and the digital codifications query parameters in a selected one of a plurality of different languages.

18 The system of claim 13, wherein the at least one generation system
15 includes means for encrypting the generated file and wherein processing system includes means for decrypting the generated file.

19 The system of claim 13, wherein the input means of the at least one generating system includes means for selecting from a list of addresses
20 processing systems for sending the generated file; and means for displaying data input masks comprising data entry fields specific to the selected processing systems.

20 The system of claim 13, wherein the at least one generating system
25 and the at least one processing system comprise means for updating codified information of a file stored in the database, means for deleting codified information of a file stored in the database and means for requesting and receiving status information in connection with a stored file.

30 21 A program storage device readable at least by a first machine and

a second machine, the program storage device tangibly embodying a program of instructions executable by the first and second machines to perform corresponding steps for structured processing of personal information, the method steps comprising:

- 5 displaying data entry masks comprising a plurality of predetermined data entry fields in the first machine;
 generating a file of a proprietary format comprising a digital codification of personal information input in the predetermined data entry fields displayed by the first machine;
- 10 downloading to a database of the second machine the personal information in the proprietary format;
 displaying query masks in the second machine, the displayed query masks comprising data fields corresponding to the data fields of the input data entry masks; and
- 15 searching for desired personal information stored in the database using the displayed query masks.

22 The program storage device of claim 21, wherein the entry fields of the input data entry masks of the first machine comprise text string entry fields and item selection fields, and wherein the query masks of the second machine comprise item selection fields corresponding to the item selection fields of the data entry masks.

23 The program storage device of claim 22, wherein the digital codification of the file corresponds to the information input in accordance with the corresponding item selection fields.

24 The program storage device of claim 21, wherein the instructions for performing the searching step comprise instructions for performing the steps of:
30 receiving as input at least one query parameter using the displayed query

masks;

generating a corresponding digital codification of the at least one input query parameter;

5 selecting at least one stored file from the database in accordance with logical relations between the digital codification of the stored file and the digital codification of the at least one query parameter; and

displaying the at least one selected file, wherein the digital codifications of the at least one selected file are displayed in the corresponding data fields of the query masks.

10

25 The program storage device of claim 22, further including instructions for displaying the items of the item selection field in a user-selected language.

15

26 The program storage device of claim 21, further including instructions for encrypting the file in the first machine and for decrypting the encrypted file in the second machine.

20

27 The program storage device of claim 21, further comprising instructions for providing transmission of information between at least the first and second machine using an information network.

25

28 The program device of claim 21, wherein the instructions for displaying the data entry masks in the first machine includes instructions for performing the steps of:

providing user-selection, from a stored list, of at least one location having the second machine to which the file is to be sent; and

displaying, for the at least one selected location, at least one data entry mask having fields which are specific to the at least one selected location.

30

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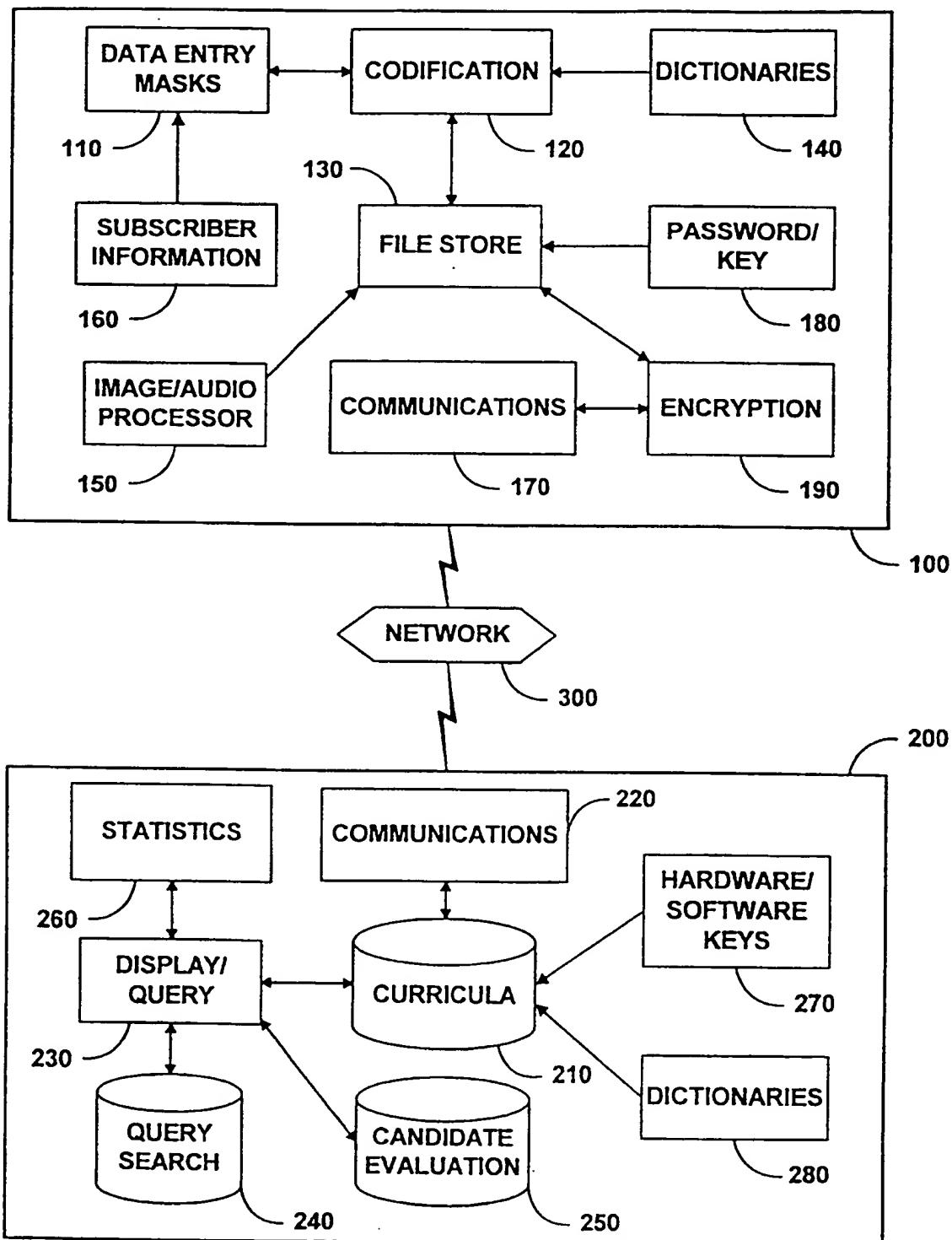


FIG. 1

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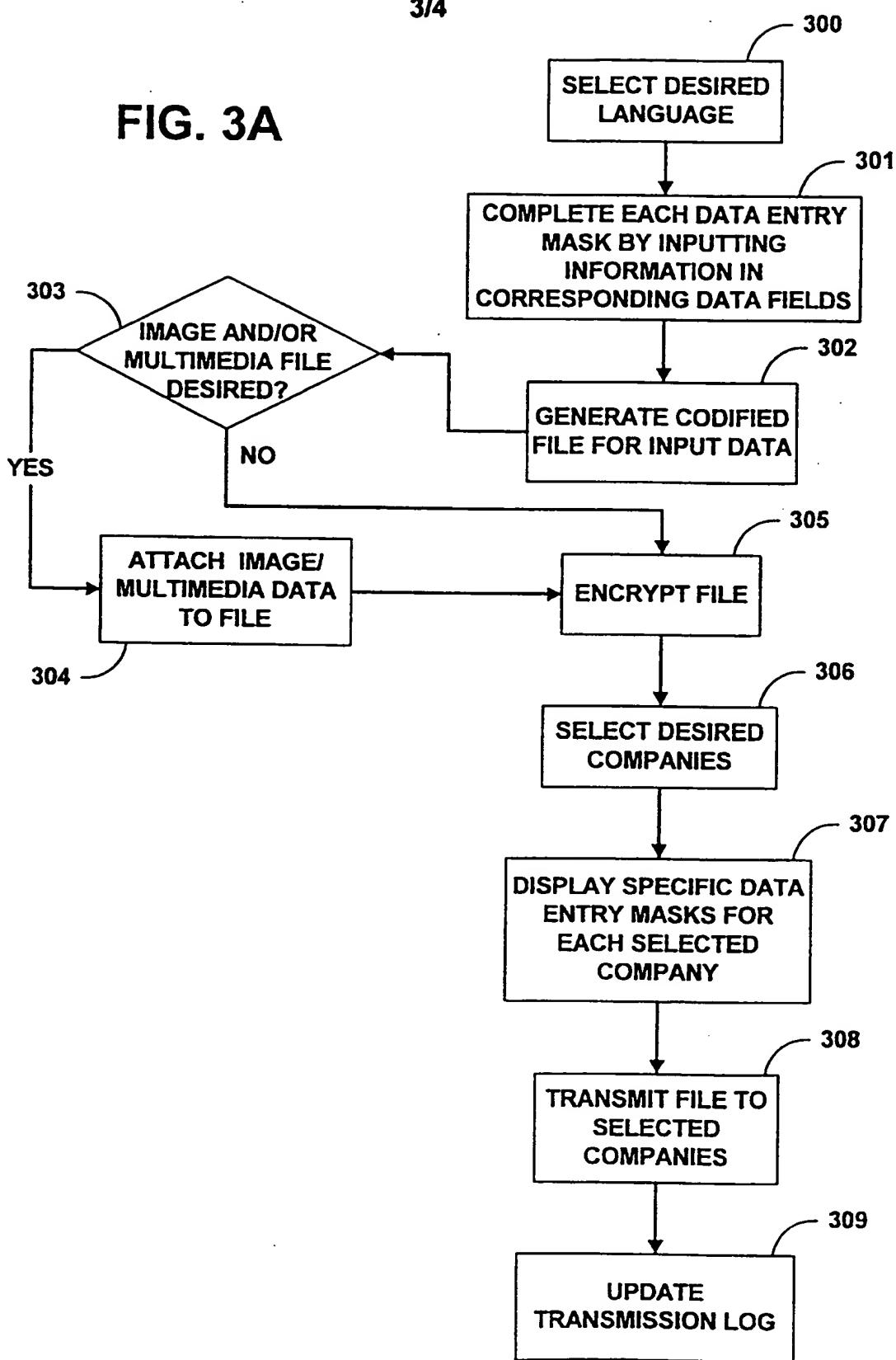
110a

| Professional Experience | | | | | |
|--|-----------------|--------------------------|---------------------------|--------------------------|---------------------------|
| Start Month/year | End Month/year | State Employee? | Last working Experience? | | |
| / <u>110b</u> ▼ | / <u>110c</u> ▼ | <input type="radio"/> No | <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> Yes |
| Contract type <u>110d</u> | | | <u>110e</u> | | |
| Company <u>110d</u> | | | <u>110e</u> | | |
| Company structure <u>110d</u> | | | <u>110e</u> | | |
| Business unit <u>110d</u> | | | <u>110e</u> | | |
| Industry sector <u>110d</u> | | | <u>110e</u> | | |
| Role <u>110d</u> | | | <u>110e</u> | | |
| Profession <u>110d</u> | | | <u>110e</u> | | |
| Describe experience <u>110f</u> | | | <u>110e</u> | | |

FIG. 2

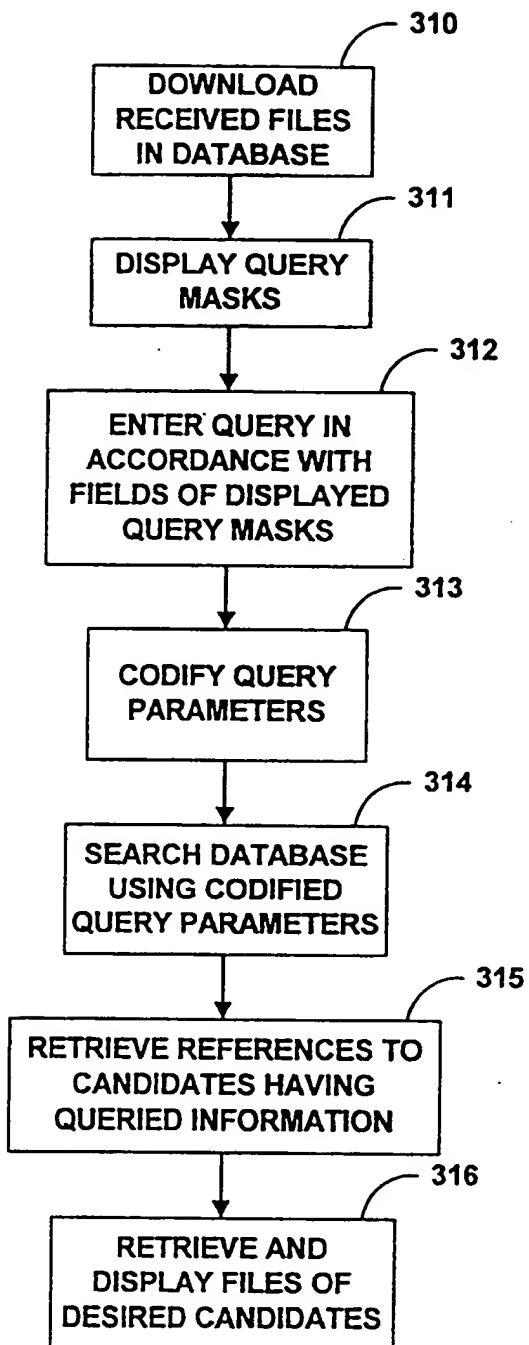
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FIG. 3A



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FIG. 3B



INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 99/05474

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G06F17/60 G06F17/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|---|
| X | US 5 758 324 A (HARTMAN RICHARD L ET AL) 26 May 1998 (1998-05-26) column 4, line 37 -column 9, line 45; figures 1,3,4 | 1-28 |
| X | WO 98 39716 A (ELECTRONIC DATA SYST CORP) 11 September 1998 (1998-09-11) | 1-4,8, 10,11, 13,14, 16, 20-24, 27,28 5-7,9, 12,15, 17-19, 25,26 |
| A | page 9, line 5 -page 17, line 35 | -/- |

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Date of the actual completion of the International search

1 December 1999

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

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Bowler, A

INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|---|----------------------------------|
| X | US 5 832 497 A (TAYLOR JEFFREY C) 3 November 1998 (1998-11-03) column 1, line 49 -column 2, line 51 column 5, line 15 -column 6, line 60 ----- | 1-4, 8-11, 13-16, 19-24 |
| A | US 5 197 004 A (SOBOTKA DAVID ET AL) 23 March 1993 (1993-03-23) column 1, line 24 -column 3, line 60 ----- | 1-28 |
| A | RADDUCK C G: "AN EMPLOYMENT APPLICATIONS INFORMATION SYSTEM" AEDS. CONVENTION PROCEEDINGS. EXPLORING WITH COMPUTERS IN VIKINGLAND, XX, XX, page 107-111 XP002067491 page 127 ----- | 1, 13, 21 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 99/05474

| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
|--|------------------|-------------------------|--|------------------|
| US 5758324 | A 26-05-1998 | NONE | | |
| WO 9839716 | A 11-09-1998 | AU 6182098 A | | 22-09-1998 |
| US 5832497 | A 03-11-1998 | NONE | | |
| US 5197004 | A 23-03-1993 | NONE | | |